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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/779,419	02/13/2004	Robert H. Wollenberg	T-6318A (538-69)	9057

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EXAMINER
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LUNDGREN, JEFFREY S

ART UNIT	PAPER NUMBER
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1639

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	12/19/2006	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/779,419	<b>Applicant(s)</b> WOLLENBERG, ROBERT H.	
	<b>Examiner</b> Jeff Lundgren	<b>Art Unit</b> 1639	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 13 September 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-61 is/are pending in the application.
- 4a) Of the above claim(s) 18-61 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>see office action</u> . | 6) <input type="checkbox"/> Other: _____  |

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## **DETAILED ACTION**

### ***Election/Restrictions***

Applicant's election with traverse of Group I, claims 1-17, in the reply filed on September 27, 2006, is acknowledged. The traversal is on the grounds that it would not be a burden to search multiple inventions.

This is not found persuasive because, as demonstrated in the restriction requirement, the Heneghan reference, while teaching each claim limitation of claim 1 in Group I, does not necessarily anticipate the claims of Groups II-IV. Accordingly, it would remain an undue burden to search the other inventions because the art is divergent. The requirement is still deemed proper and is therefore made FINAL.

Claims 1-61 are pending in the application; claims 18-61 are withdrawn as being directed to a non-elected invention; claims 1-17 are the subject of the Office Action below.

### ***Information Disclosure Statement***

The information disclosure statements (IDSs) submitted on May 18, 2004 and February 16, 2006, have been considered by the Examiner. The submissions are in compliance with the provisions of 37 CFR § 1.97. Enclosed with this Office Action is a return-copy of each Form PTO-1449 with the Examiner's initials and signature indicating those references that have been considered.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. § 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-16 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention.

Claim 1 and 15, and all dependent claims, are indefinite for reciting the phrase "the results" in step (c), because there is no antecedent basis for this phrase in step (b) (*i.e.*, step (b) states "data," not "results").

Claim 2 is indefinite for reciting the phrase “and the like” because one of ordinary skill in the art could not reasonably be able to determine the meets and bounds of this limitation. Correction is required.

Claim 9 is indefinite for reciting the phrase “a first predetermined temperature” and “a second predetermined temperature” after antecedent basis of each term had been established. It is not clear if this is a typographical error and is the same limitation being repeated, or if Applicants are referring to third and fourth predetermined temperatures.

Claim 10 is indefinite for reciting the phrase “the second predetermined temperature” because claim 1 lacks antecedent basis. Correction is required.

Claim 14 is indefinite for reciting the phrase “failure or passing of the results” because one of ordinary skill in the art would not reasonably be able to determine what is considered a failure or a passing of the results. There is no art of record, nor any support in the specification, that helps to communicate what is meant by this limitation. Correction is required.

Further, the specification is objected for lacking support of the claim limitations claim 14.

Claim 16 is indefinite for reciting the phrase “as a *basis* for obtaining results of further calculations” because one of ordinary skill in the art could not reasonably determine the metes and bounds of the claimed limitation. It is not clear from the art how the results of step (b) serve as a “basis” or how they are going to be used for “further calculations.” Correction is required.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2 and 8, are rejected under 35 U.S.C. § 102(b) as being anticipated by Heneghan et al., JOURNAL OF ENGINEERING FOR GAS TURBINES AND POWER-TRANSACTIONS OF THE ASME, (JUL 1993) Vol. 115, No. 3, pp. 480-485).

Claim 1 is directed to a method for screening fuel additives in fuel compositions by measuring deposit formation, and outputting the result.

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Heneghan teaches a method for measuring the performance of fuel additives in a plurality of fuel samples, wherein a measured performance criteria is measuring deposit formation from the fuel sample (see item 4 on page 481; item 7 on page 482; and Figure and description thereof).

As in claim 2, Heneghan teaches that one of the fuel additives is an anti-icing additive (page 484, col. 1, first full paragraph). As in claim 8, Heneghan teaches that the heating is carried out in the presence of air (page 481, first partial paragraph; *i.e.*, nitrogen/oxygen mixture).

Claims 1-6 and 8-11, are rejected under 35 U.S.C. 102(b) as being anticipated by Cherpeck, U.S. Patent No. 5,399,178, issued on March 21, 1995.

Claim 1 is directed to a method for screening fuel additives in fuel compositions by measuring deposit formation, and outputting the result.

Cherpeck teaches a series of chemical compound analogs that serve as fuel additives. Cherpeck teaches testing of multiple fuels samples by measuring their deposit formation (see Example 3). As in claims 2 and 3, the additives of Cherpeck are detergents, such as Mannich reaction products, and also meet the limitations of claim 4. As in claim 5, Cherpeck teaches heating the sample to a predetermined temperature for a predetermined period of time, and measuring the weight loss to determine deposit formation mass. As in claim 6, Cherpeck teaches that the temperature is *about* 100 °C (*i.e.*, 200 °F). As in claim 8, Cherpeck teaches heating the sample in the presence of air (see Example 3). As in claims 9 and 10, Cherpeck measures the deposits after two temperatures, wherein the second temperature is higher than the first (see Example 1). As in claim 11, Cherpeck teaches the inert solvent octane.

Claims 1-6 and 8-11, are rejected under 35 U.S.C. 102(b) as being anticipated by Cherpeck 2, U.S. Patent No. 5,306,315, issued on April 26, 1994.

Claim 1 is directed to a method for screening fuel additives in fuel compositions by measuring deposit formation, and outputting the results. Claim 7 is directed to measuring mass differences by TGA; claims 9 and 10 are directed to measuring mass difference at two different temperatures, where the second temperature is higher than the first.

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Cherpeck 2 teaches measuring fuel deposits by TGA, and teaches raising the temperatures and measuring the deposits at different temperatures (see Example 14), and accordingly meets the limitations of claims 1, 7, 9 and 10.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. § 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-6, 8-13, 15 and 17 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Cherpeck, U.S. Patent No. 5,399,178, issued on March 21, 1995, in view of Burow *et al.*, U.S. Patent Application Publication No. 2002/0090320 A1, published on July 11, 2002.

The limitations of claims 1-11 have been set forth above, and the corresponding teachings of Cherpeck are herein incorporated by reference.

Cherpeck does not explicitly teach the robot assembly for positioning samples as in claim 12; the computer that controls the robot assembly as in claim 13; the storing of the data on a data carrier as in claim 15; and transmitting results to a data carrier at a remote location as in claim 17.

Burow is directed to a system and method for high throughput processing using sample holders. As in claim 12, the system has a plurality of work perimeters, with a rotational robot preferably associated with each work perimeter, wherein the system and method are flexible,

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efficient, and robust high throughput processing, such as screening of chemical and/or biochemical libraries (see *Summary of the Invention*). As in claim 13, Burow teaches the linking of the system components with the robot for full automation, and control by a computer (paragraphs 0073 and 0074). As in claim 15, Burow teaches recording the data on a data carrier (paragraph 0093); and as in claim 17, the data carrier is in a remote location from the robot assembly (paragraph 0136).

One of ordinary skill in the art would have had a reasonable expectation of success in arriving at the invention as claimed because each of Cherpeck and Burow are directed to using analytical laboratory instrumentation for chemical analysis. One of ordinary skill in the art would have recognized the advantages of using generic and routine robotic based systems, computers, and remote operations as taught by Burow for the types of chemical analysis of Cherpeck because of the increase throughput provided by these assemblies when dealing with voluminous sample sizes. Accordingly, the invention as a whole is *prima facie* obvious over the art of record.

#### ***Common Ownership of Claimed Invention Presumed***

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the Examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR § 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the Examiner to consider the applicability of 35 U.S.C. § 103(c) and potential 35 U.S.C. §§ 102(e), (f) or (g) prior art under 35 U.S.C. § 103(a).

#### ***Conclusions***

No claim is allowable.

If Applicants should amend the claims, a complete and responsive reply will clearly identify where support can be found in the disclosure for each amendment. Applicants should point to the page and line numbers of the application corresponding to each amendment, and

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provide any statements that might help to identify support for the claimed invention (*e.g.*, if the amendment is not supported *in ipsius verbis*, clarification on the record may be helpful). Should Applicants present new claims, Applicants should clearly identify where support can be found in the disclosure.

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Jeff Lundgren whose telephone number is 571-272-5541. The Examiner can normally be reached from 7:00 AM to 5:30 PM.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, James Schultz, can be reached on 571-272-0763. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JSL

 12/11/06  
MY-CHAU T. TRAN  
PATENT EXAMINER